



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/047,188

01/15/2002

Brian C. Barnes

2000.056900/TT4089

5070

23720 7590 06/11/2008
WILLIAMS, MORGAN & AMERSON
10333 RICHMOND, SUITE 1100
HOUSTON, TX 77042

EXAMINER

TRUONG, THANHNGA B

ART UNIT

PAPER NUMBER

2135

MAIL DATE

DELIVERY MODE

06/11/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/047,188	Applicant(s) BARNES ET AL.	
	Examiner Thanhnga B. Truong	Art Unit 2135	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 February 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 8-11 and 17-20 is/are allowed.
- 6) ☐ Claim(s) 1-3, 12-14, and 16 is/are rejected.
- 7) ☐ Claim(s) 4-7 and 15 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This action is responsive to the communication filed on February 19, 2008. Claims 1-20 are pending. At this time, claims 1-7 and 12-16 are still rejected.

Response to Arguments

2. The Applicant's amendment file on February 19, 2008 has been fully considered but they are not persuasive.

Applicant argued that:

"Convey does not disclose or make obvious any type of establishment of a security level to a software object."

Examiner respectfully disagrees with the applicant and still maintain that:

Convey does teach establishment of a security level to a software object as shown in column 5, lines 9-19 and column 6, lines 4-10. In fact, Convey's invention is to observe the security behavior of untrusted software under test conditions, in order to develop greater confidence in its continued "good behavior" under field conditions. The portion of a computer system that is entrusted with enforcing (e.g. establishing) the system's security policy is known as the "Trusted Computing Base" (TCB). A "security kernel" is a particular TCB implementation technique. The TCB enforces security policy by imposing constraints on the accesses that subjects (generally processes or human users) make to "objects" (generally files, I/O devices and memory pages or segments) (column 3, lines 27-39 of Convey). In addition, Convey even suggests before giving execution control to a particular software process, the security kernel (operating system) changes the values of result label RAM 60 in order to enforce (e.g. establish) different security policies at different times or to impose different constraints upon different processes or to accommodate different classification schemes (column 6, lines 44-49 of Convey).

Applicant further argued that:

"The combination of teaching between Convey and Couleur is improper for showing the multi-table input/output space."

Examiner respectfully disagrees with the applicant and still maintains that:

Although Covey teaches memory access with page table, Covey is silent on the capability of showing the multi-table input/output space. On the other hand, Couleur teaches this limitation in the abstract and as well as in Figure 1 and column 2, lines 10-48 of Couleur.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, based on the above explanation, the combination of teaching between Convey and Couleur is efficient and proper.

Convey and Couleur do not need to disclose anything over and above the invention as claimed in order to render it unpatentable or anticipate. A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claimed limitations.

The fact that Examiner may not have specifically responded to any particular arguments made by Applicant and Applicant's Representative, should not be construed as indicating Examiner's agreement therewith.

For the above reasons, it is believed that the rejections should be sustained.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

Art Unit: 2135

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-3, 12-14, 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Covey (US 4,926,476), and further in view of Couleur et al (US 4,173,783).

a. Referring to claim 1:

i. Covey teaches a method:

(1) executing a software object (**e.g. trusted/untrusted software processes, instruction/program execution, column 3, lines 1-17; column 5, lines 9-11; column 6, lines 4-10 of Covey**);

(2) establishing a security level for said software object (**column 5, lines 9-19 and column 6, lines 4-10 of Covey**);

(3) performing a multi-table input/output (I/O) space access using at least one of said security levels (**column 5, lines 11-19 and column 6, lines 1-44 of Covey**); and

(4) executing a function of said object, wherein executing said function comprising accessing at least a portion of said input/output space (**column 5, lines 9-19 and column 6, 7-10 of Covey**).

ii. Although Covey teaches memory access, Covey is silent on the capability of showing the multi-table input/output space. On the other hand, Couleur teaches this limitation in the abstract and as well as in **column 2, lines 10-48 of Couleur**.

iii. It would have been obvious to a person having ordinary skill in the art at the time the invention was made to:

(1) have modified the invention of Covey with the teaching of Couleur employing paged memory storage and the accessing of paged memory by the input-output unit in a data processing system (**column 1, lines 11-13 of Couleur**).

iv. The ordinary skilled person would have been motivated to:

(1) have modified the invention of Covey with the teaching of Couleur to improve accessing paged memory by peripherals through I/O apparatus (**column 2, lines 11-13 of Couleur**).

b. Referring to claim 2:

i. Covey further teaches:

(1) wherein executing a software object further comprises using a processor to process software code of said software object (**column 6, lines 4-10 of Covey**).

c. Referring to claim 3:

i. The combination of teaching between Covey and Couleur teaches the claimed subject matter. Covey and Couleur further teach:

(1) wherein establishing a security level for said software object further comprises assigning a security level relating to an I/O space access of at least a portion of a memory (**column 5, lines 11-19 and column 6, lines 1-44 of Covey**).

ii. Although Covey teaches memory access, Covey is silent on the capability of showing the multi-table input/output space. On the other hand, Couleur teaches this limitation in the abstract and as well as in **column 2, lines 10-48 of Couleur**.

iii. It would have been obvious to a person having ordinary skill in the art at the time the invention was made to:

(1) have modified the invention of Covey with the teaching of Couleur employing paged memory storage and the accessing of paged memory by the input-output unit in a data processing system (**column 1, lines 11-13 of Couleur**).

iv. The ordinary skilled person would have been motivated to:

(1) have modified the invention of Covey with the teaching of Couleur to improve accessing paged memory by peripherals through I/O apparatus (**column 2, lines 11-13 of Couleur**).

d. Referring to claims 12-13:

i. These claims consist an apparatus to implement claim 1, thus they are rejected with the same rationale applied against claim 1 above.

ii. Covey further teaches a processor coupled to a bus (**see Figure 1, CPU of Covey**); means for coupling at least one software object to said processor (**column 6, lines 4-10 of Covey**).

iii. Couleur further teaches I/O device (**column 2, line 23 of Couleur**).

e. Referring to claim 14:

i. Covey further teaches:
(1) wherein said processor comprises at least one microprocessor (**column 9, lines 58-59 of Covey**).

f. Referring to claim 16:

i. Covey further teaches:
(1) wherein said I/O device comprises a memory that comprises at least one of a magnetic tape memory, a flash memory, a random access memory, and a memory residing on a semiconductor chip (**column 6, lines 1-67 of Covey**).

Allowable Subject Matter

5. Claims 8-11 and 17-20 are allowed

6. Claims 4 and 15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all the limitations of the base claim and any intervening claims.

Claims 5-7 are depended to claim 4, thus they are objected with the same rationale applied against claim 4 above.

Conclusion

7. Accordingly, THIS ACTION IS MADE FINAL. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed

within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thanhnga (Tanya) Truong whose telephone number is 571-272-3858.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Vu can be reached at 571-272-3859. The fax and phone numbers for the organization where this application or proceeding is assigned is 571-273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-2100.

/Thanhnga B. Truong/
Primary Examiner, Art Unit 2135

TBT
June 6, 2008